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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,661	12/27/2004	Donald L. Rymer	AD6871USPCT	7413

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EXAMINER	
BERNSHTEYN, MICHAEL	

ART UNIT	PAPER NUMBER
1713	

DATE MAILED: 11/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/519,661	RYMER ET AL.	
	Examiner	Art Unit	
	Michael Bernshteyn	1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 September 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) *1-5 and 13-18* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *6-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-18* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's election with traverse of Group II, claims 6-12, 17, 23, 25 and 27 in the reply filed on September 18, 2006 is acknowledged. The traversal is on the ground(s) that according to PCT Rule, claims of different categories with common special technical features do not lack novelty. This is not found persuasive because the claimed common special technical feature in all claims is the polyvinylbutyral (PVB) resin composition having a hydroxyl number of about 15 to about 34 and a mixture of meso and rasemic stereoisomers in which the ratio of meso stereoisomers to rasemic stereoisomers is in the range of from about 2.5 to about 5.0, and this common special technical feature lacks of novelty.

The requirement is still deemed proper and is therefore made FINAL.

2. This Office Action follows a response filed on September 18, 2006. Claims 1, 3-6, 11 and 12 and 3 have been amended. Claims 1-5 and 13-18 have been withdrawn from the further consideration by the examiner, 37 CFR 1.142 (b), as being drawn to non-elected invention.

3. Applicant's arguments, see remarks, filed on September 18, 2006, with respect to the rejection of claims 6-8 and 10-11 under 35 U.S.C. 102(b) and 103(a) and to the rejection of claim 9 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Rombach et al. (U. S. Patent 3,153,009), Aurenty et al. (U. S. Patent 6,472,054) and Kroggel et al. (U. S. Patent 5,559,174).

4. In view of the amendment the objection of claim 11 and the rejection of claim 12 under 35 U.S.C. 112 has been withdrawn.

5. Claims 6-12 are active.

Claim Rejections - 35 USC § 103

6. The test of this section of Title 35 U.S.C. not included in this action can be found in a prior Office Action.

7. Claims 6-8 and 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable as obvious over Klock et al. (EP 0 402 213 A1) in view of Rombach et al. (U.S. Patent 3,153,009).

With regard to the limitation of instant claims 6-8 and 10-11, Klock discloses a process for preparing PVB composition having a mixture of butyral meso and butyral racemic stereoisomers using aqueous polyvinyl alcohol solution and butyraldehyde (abstract, page 5, lines 10-12). Agitation of reaction mixture takes place between 5 and 12^0C during initially 10-90 minutes then the temperature increase up to 80^0C and the process continuous during 1-4 hours. Dry weight PVA concentration is in the range 8-15% based on the total weight of solution. A surfactant (sodium dodecylbenzene sulfonate, **sodium lauryl sulfate** or **sodium dioctylsulfosuccinate**) is present in the amount of **0.3-0.4-wt%** based on the dry weight of PVA. In the next steps the **pH raises up to 9-11** and PVB composition is neutralized with neutral water (page 2, lines 3-34, examples 1-4, pages 5 and 6). Hydrochloric acid with density 1.18 is used as acid compound (example 1, page 5, line 20). The final products have a **hydroxyl number**

between 18 and 22 and meso to racemic ratio (M/R) in the claimed range (examples 1-4, pages 5 and 6).

Klock does not disclose that pH mixture is from about 1.3 to about 2.5.

In view of substantially identical process, it is the examiner position that Klock 's process for preparing PVB composition inherently possesses this property because it contains the same main steps, used the same meso and racemic stereoisomers of butyral monomers, acidic aqueous PVA solution having the same concentration and hydrochloric acid, the same surfactants in the amount within the claimed range and the obtained final products have the same main properties (hydroxyl number and meso to racemic ratio (M/R) are within the claimed ranges). Since the USPTO does not have equipment to do the analytical test, the burden is now shifted to the applicant to prove otherwise. ***In re Best***, 195 USPQ 430, (CCPA 1977).

Klock does not disclose in step (b) stirring reaction mixture (RM) at a temperature in the range of from 80^0C to about 100^0C.

Rombach discloses that the reaction mixture was heated at 90^0C under agitation for 81 minutes, which is exactly within the claimed range.

Both references are analogous art because they are from the same field of endeavor concerning new processes for producing polyvinyl butyral resin.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to adjust the temperature of the reaction mixture within the claimed range as taught by Rombach in Klock's process for producing polyvinyl butyral resin with reasonable expectation of success.

Even if the combined disclosure of Klock and Rombach does not satisfy the requirements of 35 U.S.C. 103(a), particularly with respect to the pH mixture and the temperature of agitation (stirring), it still would have been obvious to one of ordinary skill in the art to arrive at the claimed process for preparing PVB composition, because it appears that the claimed process for preparing PVB composition is within the generic disclosure of Klock and Rombach, and a person of ordinary skill in the art would have expected all embodiment of Klock and Rombach to have similar properties. Applicant has not demonstrated that the differences, if any, between the claimed process for preparing PVB composition and the process for preparing PVB composition by Klock and Rombach give rise to unexpected results. The evidence presented to rebut *prima facie* case of obviousness must be commensurate in scope with the claims to which it pertains. See ***In re Dill and Scales***, 202 USPQ 805 (CCPA 1979).

It is axiomatic that one who performs the steps of a process must necessarily produce all of its advantage. Mere recitation of a newly discovered property or function what is inherently possessed by the things or steps in the prior art does not cause a claim drawn to those things to distinguish over the prior art. ***Leinoff v. Louis Milona & Sons, Inc.*** 220 USPQ 845 (CAFC 1984).

8. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Klock in view of Rombach as applied to claims 6-8 and 10-11 and further in view of Aurenty et al. (U. S. Patent 6,472,054).

The disclosure of Klock and Rombach's references resided in § 7 is incorporated herein by reference.

With regard to the limitation of instant claim 9, the combined teaching of Klock and Rombach does not disclose sodium methyl cocoyl taurate as the surfactant.

Aurenty discloses that Illustrative examples of alkyl tail surfactants include sodium dodecylsulfate, isopropylamine salts of an alkylarylsulfonate, **sodium dioctyl succinate, sodium methyl cocoyl taurate, dodecylbenzene sulfonate**, alkyl ether phosphoric acid, N-dodecylamine, dicocoamine, 1-aminoethyl-2-alkylimidazoline, 1-hydroxyethyl-2-alkylimidazoline, and cocoalkyl trimethyl quaternary ammonium chloride, polyethylene tridecyl ether phosphate, and the like.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate sodium methyl cocoyl taurate as taught by Aurenty in Klock and Rombach's process for preparing PVB composition because all of the above surfactants are functionally equivalents and can substitute each other.

9. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Klock in view of Rombach as applied to claims 6-8 and 10-11 and further in view of Kroggel et al. (U. S. Patent 5,559,175).

The disclosure of Klock and Rombach's references resided in § 7 is incorporated herein by reference.

The combined teaching of Klock and Rombach does not disclose that the acid compound or mixture of acid compounds comprises phosphoric acid.

Kroggel discloses that all suitable acid catalysts are in principle all the acids which can be employed for the synthesis of the polyvinyl acetals known to date, for

example strong mineral acids, such as, for example, hydrochloric acid, sulfuric acid, **phosphoric acid**, nitric acid and the like (col. 5, lines 23-25).

Both references are analogous art because they are from the same field of endeavor concerning new processes for producing polyvinyl acetal resin.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ phosphoric acid as taught by Kroggel in combined Klock and Rombach's process for producing polyvinyl butyral resin instead of hydrochloric acid because they are functional equivalents and can be substituted by each other with reasonable expectation of success.

Thus, the combination of Klock, Rombach, Kroggel and Aurenty renders claims 6-12 *prima facie* obvious in view of absent of unexpected results commensurate in scope of claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Bernshteyn whose telephone number is 571-272-2411. The examiner can normally be reached on M-F 8-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael Bernshteyn
Examiner
Art Unit 1713

MB
11/20/2006

LING-SUI CHOI
PRIMARY EXAMINER